

Date: Sat, 11 Dec 93 04:30:51 PST  
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>  
Errors-To: Ham-Space-Errors@UCSD.Edu  
Reply-To: Ham-Space@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Space Digest V93 #106  
To: Ham-Space

Ham-Space Digest                      Sat, 11 Dec 93                      Volume 93 : Issue 106

Today's Topics:

                    ARLK051 Keplerian data  
            Two-Line Orbital Element Set: Space Shuttle (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>  
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Mon, 6 Dec 1993 12:31:39 -0700  
From: usc!math.ohio-state.edu!news.cyberstore.ca!nntp.cs.ubc.ca!alberta!nebulus!  
ve6mgs!usenet@network.ucsd.edu  
Subject: ARLK051 Keplerian data  
To: ham-space@ucsd.edu

SB KEP @ ARL \$ARLK051  
ARLK051 Keplerian data

ZCZC SK63  
QST de W1AW  
Keplerian Bulletin 51 ARLK051

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Date: Tue, 7 Dec 1993 18:32:41 MST  
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!news.cyberstore.ca!  
nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu  
Subject: Two-Line Orbital Element Set: Space Shuttle  
To: ham-space@ucsd.edu

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (513) 427-0674, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

HST

1	20580U	90037B	93340.57763371	-.00010895	00000-0	-10401-2	0	3720
2	20580	28.4710	33.0526	0005228	74.4558	285.3400	14.92850041	622

STS 61

1	22917U	93075A	93340.60462947	.00010758	00000-0	10000-2	0	199
2	22917	28.4724	32.8782	0005129	72.1803	72.9843	14.92862373	635

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Dr TS Kelso  
tkelso@afit.af.mil

Assistant Professor of Space Operations  
Air Force Institute of Technology

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Date: Wed, 8 Dec 1993 19:29:37 MST

From: pravda.sdsc.edu!usc!howland.reston.ans.net!math.ohio-state.edu!  
news.cyberstore.ca!nntp.cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!alberta!  
nebulus!ve6mgs!usenet@network.ucsd.edu

Subject: Two-Line Orbital Element Set: Space Shuttle

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HST

1	20580U	90037B	93342.18224267	.00001976	00000-0	17144-3	0	3736
2	20580	28.4711	22.7168	0004834	74.5428	286.4012	14.92967518	864

STS 61

1	22917U	93075A	93341.60416667	.00000286	00000-0	19688-4	0	219
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2 22917 28.4699 26.4384 0005644 80.6580 46.6994 14.92813976 787

HST Array

1 22920U 90037C 93341.24574881 .00016001 00000-0 14665-2 0 75

2 22920 28.4688 28.7427 0005369 44.8841 315.2030 14.93573373 723

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Dr TS Kelso  
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Assistant Professor of Space Operations  
Air Force Institute of Technology

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Date: 11 Dec 93 01:09:50 GMT

From: ogicse!emory!europa.eng.gtefsd.com!paladin.american.edu!afterlife!  
blackbird.afit.af.mil!tkelso@network.ucsd.edu

Subject: Two-Line Orbital Element Set: Space Shuttle

To: ham-space@ucsd.edu

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HST

1 20580U 90037B 93343.39583333 .00000298 00000-0 22324-4 0 3791

2 20580 28.4711 14.8965 0005601 267.3006 145.0087 14.90298067 1056

STS 61

1 22917U 93075A 93343.39583333 .00000298 00000-0 22324-4 0 249

2 22917 28.4711 14.8965 0005601 267.3006 145.0087 14.90298067 1052

HST Array

1 22920U 90037C 93343.31724479 .00013336 00000-0 12188-2 0 93

2 22920 28.4713 15.3748 0005153 66.7755 293.3908 14.93622839 1035

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Dr TS Kelso  
tkelso@afit.af.mil

Assistant Professor of Space Operations  
Air Force Institute of Technology

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Date: (null)

From: (null)

SB KEP ARL ARLK051

ARLK051 Keplerian data

Thanks to NASA, AMSAT and N3FKV for the following Keplerian data.

Decode 2-line elsets with the following key:

1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ  
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ  
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN  
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-61

1 22917U 93075 A 93338.39481481 0.00000532 50000-4 0 112  
2 22917 28.4700 47.1258 0004745 35.5549 89.3999 14.92968181 312

HST

1 20580U 90037 B 93338.39481481 0.00000532 50000-4 0 3697  
2 20580 28.4700 47.1258 0004745 35.5549 89.3999 14.92968181196963

AO-10

1 14129U 83058 B 93328.37358304 0.00000006 10000-3 0 2126  
2 14129 27.1967 354.6814 6020029 132.8205 296.5509 2.05877703 50585

RS-10/11

1 18129U 87054 A 93332.42270253 0.00000059 57861-4 0 8140  
2 18129 82.9259 117.2417 0010740 217.0444 143.0089 13.72327034322379

UO-11

1 14781U 84021 B 93334.56060295 0.00000200 37883-4 0 6150  
2 14781 97.7956 353.4973 0011482 179.8391 180.2820 14.69091713521149

RS-12/13

1 21089U 91007 A 93335.60629654 0.00000062 59526-4 0 6162  
2 21089 82.9186 157.9722 0028484 300.8203 59.0141 13.74031015141507

AO-13

1 19216U 88051 B 93335.84660375 -.00000229 10000-4 0 8204  
2 19216 57.9029 281.1629 7211005 329.5804 3.4589 2.09726084 10377

UO-14

1 20437U 90005 B 93334.69642848 0.00000066 33274-4 0 9151  
2 20437 98.6046 57.0601 0011889 55.3459 304.8840 14.29806558201220

AO-16

1 20439U 90005 D 93334.68970974 0.00000056 29505-4 0 7155  
2 20439 98.6123 58.0868 0012249 55.8918 304.3434 14.29863405201239

DO-17

1 20440U 90005 E 93334.66327841 0.00000062 31771-4 0 7159  
2 20440 98.6134 58.3203 0012311 55.5998 304.6342 14.30000807201247

WO-18

1 20441U 90005 F 93334.21540152 0.00000060 31195-4 0 7162  
2 20441 98.6128 57.8916 0012863 57.2334 303.0100 14.29978366201181

LO-19

1 20442U 90005 G 93334.69648230 0.00000055 29004-4 0 7150  
2 20442 98.6137 58.5780 0013153 55.4957 304.7459 14.30070867201268

FO-20

1 20480U 90013 C 93330.50118171 -.00000019 -16586-4 0 6111  
2 20480 99.0189 155.8314 0541157 78.7761 287.3633 12.83222138178132

AO-21

1 21087U 91006 A 93334.52703634 0.000000084 82657-4 0 3724  
 2 21087 82.9438 289.7212 0034068 279.0086 80.7210 13.74529132142291  
 U0-22  
 1 21575U 91050 B 93334.67727514 0.000000086 36002-4 0 4157  
 2 21575 98.4566 47.9847 0007826 156.5425 203.6132 14.36868808124578  
 K0-23  
 1 22077U 92052 B 93335.44100612 0.000000000 10000-3 0 3129  
 2 22077 66.0879 334.0117 0005948 336.7167 23.3555 12.86282019 61351  
 Arsene  
 1 22654U 93031 B 93321.93138545 -.000000051 10000-3 0 2107  
 2 22654 1.4185 113.8817 2935300 161.0091 211.2000 1.42195961 2757  
 K0-25  
 1 22827U 93061 E 93335.16121361 0.000000081 40985-4 0 2771  
 2 22827 98.6724 47.7643 0010126 57.1985 303.0169 14.27795920 9439  
 I0-26  
 1 22826U 93061 D 93335.65645330 0.000000067 35056-4 0 2150  
 2 22826 98.6753 48.2666 0010130 68.0262 292.2022 14.27695161 9506  
 A0-27  
 1 22825U 93061 C 93335.66121621 0.000000054 30201-4 0 2144  
 2 22825 98.6748 48.2617 0009506 67.0884 293.1315 14.27592650 9503  
 P0-28  
 1 22829U 93061 G 93299.20720744 0.000000225 10695-3 0 2074  
 2 22829 98.6741 12.0806 0010509 157.5898 202.5757 14.27978468 4306  
 Mir  
 1 16609U 86017 A 93336.31717093 0.00019897 25845-3 0 103  
 2 16609 51.6174 94.8137 0005668 49.1420 311.0252 15.58790642445335

Keplerian bulletins are transmitted twice weekly from W1AW.  
 The next scheduled transmission of these data will be Tuesday,  
 December 7, 1993, at 2330z on Baudot and AMTOR.  
 NNNN  
 /EX

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 End of Ham-Space Digest V93 #106  
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